

# NATO SMALL ARMS AMMUNITION STANDARDIZATION PROGRAM

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LUXEMBOURG    NETHERLANDS    NORWAY    PORTUGAL    SPAIN    TURKEY    UNITED KINGDOM    UNITED STATES

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# ***THREE NEW NATO NATIONS***

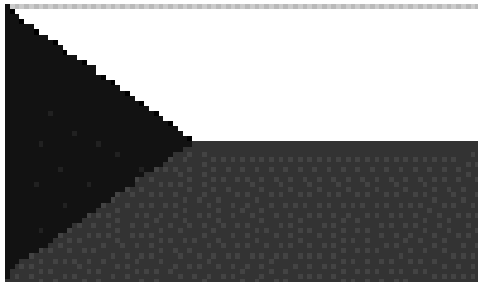
## ***MARCH 1999***

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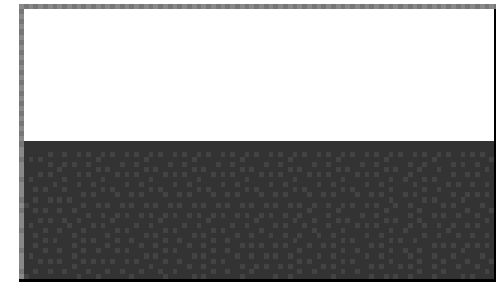
### **CZECH REPUBLIC**



### **HUNGARY**



### **POLAND**



**AND 27 MORE UNDER CONSIDERATION.....**



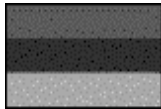
# ***NATO PARTNERSHIP FOR PEACE 27 NATIONS SEEKING MEMBERSHIP***



**Albania**



**Armenia**



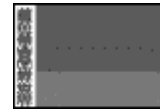
**Austria**



**Azerbaijan**



**Belarus**



**Bulgaria**



**Croatia**



**Estonia**



**Finland**



**Georgia**



**Ireland**



**Kazakhstan**



**Kyrgyz Republic**



**Latvia**



**Lithuania**



**Moldova**



**Romania**



**Russia**



**Slovakia**



**Slovenia**



**Former Yugoslav  
Republic of Macedonia**



**Sweden**



**Switzerland**



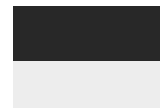
**Tadjikistan**



**Turkmenistan**



**Ukraine**



**Uzbekistan**





# ***NATO SMALL ARMS AMMUNITION STANDARDIZATION PROGRAM***

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## **OUTLINE**

- ▲ **Terms Of Reference**
- ▲ **Overall Goal**
- ▲ **Battlefield Interchangeability**
- ▲ **Testing Facilities**
- ▲ **Current Status**
- ▲ **NATO Qualified Ammunition Designs**
- ▲ **NATO Nominated National Weapons**
- ▲ **NATO Standardization Benefits**
- ▲ **New Business Opportunities**
- ▲ **Current Thrusts**
- ▲ **Future Thrusts**
- ▲ **Partnership For Peace**
- ▲ **PDW Update**





# ***TERMS OF REFERENCE***

## ***NATO LAND GROUP 3, SUBGROUP 1***

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- ▲ **Prepare Technical Documentation (STANAGs, Drawings and Manuals of Proof And Inspection) Necessary to Ensure Standardization/Interchangeability of Small Caliber Ammunition up to 40 MM**
- ▲ **Verify the Interchangeability of NATO Ammunition Through Direct Evidence Testing at NATO Certified Regional and National Test Centers**
- ▲ **Authorize and Control the Use of the NATO Symbol of Interchangeability**
- ▲ **Develop Solutions to Technical and Procedural Problems**



# *OVERALL GOAL*

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Accomplish and Maintain Battlefield  
Interchangeability of Small and Cannon  
Caliber Ammunition and Ancillary Items  
without the Need for System Adjustments



# ***BATTLEFIELD INTERCHANGEABILITY***



- ▲ **Proper Weapon Function**
- ▲ **Safety of Gunner**
- ▲ **Adequate Terminal Effectiveness**

## **WITHOUT THE NEED FOR :**

- ▲ **Gun Adjustments**
- ▲ **Sight or Fire Control Adjustments**
- ▲ **Range or Mission Limitations**
- ▲ **Ammunition Repack**



# ***ACCOMPLISHING BATTLEFIELD INTERCHANGEABILITY:***

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- ▲ **Identification of Areas of International Interest**
  - ✓ **Guidance From Higher Levels Within NATO**
- ▲ **Development of STANAG by SG/1**
  - ✓ **Physical Characteristics**
  - ✓ **Performance Levels**
  - ✓ **Packing and Marking Requirements**
- ▲ **Development of the Manual of Proof and Inspection by SubGroup 1**
  - ✓ **Type of Testing Required**
  - ✓ **Accept/Reject Criteria**
  - ✓ **Test Methods, Procedures and Equipment**
  - ✓ **Test Results Analysis**



# ***ACCOMPLISHING BATTLEFIELD INTERCHANGEABILITY (CONT'D)***



- ▲ **National Ratification of STANAG**
- ▲ **Submission of Ammunition Samples from Ratifying Nations to NATO Regional Test Centers for NATO Qualification Approval Testing**
- ▲ **Approval of Successful Ammunition Designs by SG/1 and Documentation (Issuance of Official NATO Design Numbers) by the NATO International Staff**



# ***MAINTAINING BATTLEFIELD INTERCHANGEABILITY***

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- ▲ **Mandatory Continuous Direct Evidence Testing**
  - ✓ **NATO Production Tests**
  - ✓ **NATO Surveillance Tests**
  
- ▲ **Control of the National Technical Data Package (TDP)**
  
- ▲ **Amendments to Manuals of Proof and Inspection**



# ***TESTING FACILITIES***

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- ▲ **Two Types of NATO Test Facilities:**
  - ✓ **Regional Test Center**
  - ✓ **National Center Test**
  
- ▲ **Two (2) Regional Test Centers:**
  - ✓ **North American (Co-located at the Lake City Army Ammunition Plant, Independence, Missouri)**
  - ✓ **European (Located in Pendine, Wales, U.K.)**
  
- ▲ **Currently Ten (10) Certified National Test Centers for Various Calibers**



## ***DIRECT EVIDENCE TESTING***

### **NATO REGIONAL TEST CENTERS:**

- **Qualification , Production, Surveillance Testing**
- **Range Standardization Testing**
- **New/Replacement Equipment Evaluations**
- **STANAG/MOPI Development**
- **Reference Ammunition Assessment**
- **NATO Nominated Weapon Evaluations**
- **Engineering Studies**





# ***DIRECT EVIDENCE TESTING (CONT'D)***

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## **NATIONAL TEST CENTERS:**

**Certification by Caliber and Inspected by RTC  
Superintendents, Approved by SG/1**

- ▲ **Surveillance Testing**
- ▲ **Range Standardization Testing**
- ▲ **New/Replacement Equipment Evaluations**
- ▲ **Prove-out For STANAG And MOPI**
- ▲ **Verification**



## ***CURRENT STATUS***

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- ▲ 76 NATO Qualified Designs from 11 Different NATO Nations (16 in the Last Three Years with Several Ongoing and Planned NATO QA Tests)
- ▲ 22 NATO Nominated National Weapon Systems Representative of 9 Different NATO Nations



# ***QUALIFIED DESIGNS***

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## **9 MM**

**U.S. - BALL (3)**

**CANADA - BALL (2)**

**BELGIUM - BALL (2)**

**FRANCE – BALL (1)**

**GERMANY - BALL (3)**

**ITALY - BALL (3)**

**NETHERLANDS - BALL (1)**

**SPAIN – BALL (1)**

**U.K. – BALL (1)**

## **25 MM**

**U.S. - TPT (1)**

**U.S - HEIT (1)**

## **5.56 MM**

**U.S. - BALL (1)**

**CANADA - BALL/TRACE (1/1)**

**BELGIUM – BALL/TRACE (3/1)**

**GERMANY – BALL (2)**

**ITALY – BALL/TRACE (2/1)**

**NETHERLANDS - BALL (1)**

**PORTUGAL – BALL (1)**

**SPAIN – BALL (1)**

**U.K. - BALL/TRACE (2/1)**

## **7.62 MM**

**U.S. - BALL/TRACE (5/2)**

**CANADA - BALL/TRACE (3/1)**

**BELGIUM - BALL/TRACE (4/1)**

**FRANCE - BALL/TRACE (2/2)**

**GERMANY - BALL/TRACE (1/1)**

**ITALY - BALL (2)**

**NETHERLANDS - BALL/AP/LINKS (1/1/1)**

**NORWAY - BALL/TRACE (2/2)**

**PORTUGAL - BALL/TRACE/LINKS (2/1/1)**

**SPAIN – BALL/TRACE (1/1)**

**U.K. - BALL (1)**



## ***NATO NOMINATED NATIONAL WEAPONS***



<b><u>COUNTRY</u></b>	<b><u>5.56 MM</u></b>	<b><u>7.62 MM</u></b>	<b><u>9 MM</u></b>
<b>BELGIUM</b>	<b>FNC RIFLE MINIMI MG</b>	<b>LAR RIFLE</b>	<b>HI-POWER PISTOL</b>
<b>FRANCE</b>	<b>FAMAS RIFLE</b>	<b>NFI MG</b>	<b>-----</b>
<b>GERMANY</b>	<b>G36*</b>	<b>G3A2 RIFLE</b>	<b>P1 PISTOL</b>
<b>ITALY</b>	<b>AR70/90A RIFLE</b>	<b>-----</b>	<b>92F PISTOL 12S SMG</b>
<b>UK</b>	<b>L85A1 RIFLE</b>	<b>L7A2 MG</b>	<b>-----</b>
<b>U.S.</b>	<b>M16A2 RIFLE</b>	<b>M60 MG T65E1</b>	<b>-----</b>



## ***NATO NOMINATED NATIONAL WEAPONS***



<b><u>COUNTRY</u></b>	<b><u>12.7 MM</u></b>	<b><u>25 MM</u></b>	<b><u>40 MM</u></b>
<b>NETHERLANDS</b>	<b>-----</b>	<b>KBA-B02B</b>	<b>-----</b>
<b>SPAIN</b>	<b>-----</b>	<b>-----</b>	<b>LAG-40 AGL</b>
<b>U.S.</b>	<b>M2HB</b>	<b>M242</b>	<b>MK19 AGL</b>



## ***NATO SMALL ARMS AMMUNITION STANDARDIZATION PROGRAM BENEFITS***



- ▲ **Accomplishes Interchangeability of Small and Cannon Caliber Ammunition up to 40 MM**
- ▲ **Provides Significant Stockpile Multiplier**
- ▲ **Provides Logistic, Strategic and Tactical Advantages**
- ▲ **Supports Coalition Warfare**
- ▲ **Provides FMS and Associated Benefits to U.S. Production Base**



## ***NEW BUSINESS OPPORTUNITIES***



- ▲ **Recent Use of Coalition Forces Has Dramatically Increased Participation in Standardization from Member Nations**
- ▲ **National Procurement Strategies Have Changed Due to Severe Budget Constraints and the World Market is Being Tested by Each Member Nation**
- ▲ **Significant Participation from Non-NATO Manufacturers**
- ▲ **Many Nations Purchase Only NATO-Qualified Ammunition Designs and NATO Nominated National Weapon Systems**



# ***CURRENT THRUSTS***

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- ▲ **Completion of the NATO 12.7 MM STANAG and MOPI (Awaiting Ratification/Implementation Process)**
- ▲ **Completion of the D/14 Update (Evaluation Procedures For Future Small Arms Weapons Systems) Taking the CRISAT Program into Account**
- ▲ **Completion of the 40 MM HV STANAG and MOPI (to be Forwarded to NATO HQ for RAT/IMP Procedures within Two Months)**
- ▲ **Development of an Alternate Residual Stress Testing Method (Mercurous Nitrate Vs Ammoniacal Copper Sulfate)**
- ▲ **RTC/NTC Facilitization for 12.7 MM and 40MM HV Ongoing**
- ▲ **NATO QA Testing Pending on Two (2) US 25 MM APDS-T and One (1) Netherlands APDS-T Samples at the Official NATO 25MM NTC**





# ***CURRENT THRUSTS (CONT'D)***

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- ▲ **Successful Completion of NNW Testing on the Italian AR-70/90 5.56 MM Rifle**
- ▲ **5.56 MM MINIMI Style Machine Gun Dovetail Standardization for Linked Ammo Packs**
- ▲ **Development of “Green Ammunition” for NATO QA (Germany)**
- ▲ **NTC Certifications Completed in Germany and Portugal Recently**
- ▲ **NATO Survey Form Developed to be Completed and Reported at Each SG/1 Meeting Demonstrating Level of Participation from Each Nation (QA, Production, Surveillance, Buying NATO Qualified Ammo?, Etc.)**
- ▲ **Development of a Multi-caliber MOPI Which Will Eliminate/Reduce Inconsistencies Between Documents and Clarify/Simplify Especially for PFP Nations**



# ***FUTURE THRUSTS***

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- ▲ **40 MM Low Velocity Standardization**
- ▲ **30 MM x 173 MM Standardization (MC AAAV And AF GAU-8)**
- ▲ **German 5.56 MM Rifle G36 NNW Testing**
- ▲ **PDW Replacement for 9 MM (LG/3-WG/1)**
- ▲ **NTC Certification Inspections Scheduled for Canada and Belgium with Greece and Turkey Planned in the Near Future**
- ▲ **Development of a NATO HQ Website**
- ▲ **PFP Initiatives**



# ***PARTNERSHIP FOR PEACE (PFP)***

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- ▲ **Two (2) NATO PFP SG/1 Workshops Have Been Held Since 1997**
- ▲ **Routine Participation from Three (3) New Member Nations**
- ▲ **Routine Participation from as Many as Nine (9) PFP Nations**
- ▲ **NATO Industrial Advisory Group Currently Assisting PFP Nations in Converting Their Warsaw Pact Weapons to NATO Standards (Sweden)**
- ▲ **In Addition to 27 PFP Nations, PFP Has Opened the Door for Nations Such as Australia and New Zealand to Obtain Sponsorship Through a Member Nation (UK)**
- ▲ **Development of SG/1 PFP NTC Inspection Policies**



# ***PDW UPDATE***

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- ▲ **Problem: Current 9 MM Round Is Ineffective Against the CRISAT Target**
- ▲ **The UK will be Conducting Its Own PDW Program to Replace its 9 MM Browning Pistol and Opened the Door to NATO to Expedite Assessments**
- ▲ **Nov 98 – LG/3-WG/1 was Formed to Recommend the Ammunition Parameters for the Caliber to Replace the Extant 9 MM over Time**
- ▲ **Terms of Reference and Program of Work Completed in September 1999**
- ▲ **URD and SRD were Finalized with Key NATO Parameters Identified as Hit Probability, Incapacitation and Suppression**
- ▲ **UK Contracts Bulletin Sent to Industry**
- ▲ **Initial Assessment Scheduled Week of 25 Sep 2000 at Ft. Halstead, DERA, UK with Five (5) Competitors and  $P_H$  And  $P_{I/H}$  will be Assessed**
- ▲ **Full System Assessment: Oct 00 to May 01**
- ▲ **PDW Caliber Recommendation to LG/3 Anticipated Early 2002**